SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
2317	9

DATE MAILED: 01/24/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on __1-8-97__ ☒ This action is made final.

A shortened statutory period for response to this action is set to expire __3__ month(s), __0__ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I   THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II   SUMMARY OF ACTION

1. ☒ Claims __1-56__ are pending in the application.

    Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims __1-56__ are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings
    are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the
    examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received
    ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in
    accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other _____

EXAMINER'S ACTION

PTOL-326 (Rev. 2/93)

Part III DETAILED ACTION

The Wynne reference is withdraw in view of Applicant's Rule

131 Declaration filed 01-08-97.

The following is a quotation of 35 U.S.C. 103(a) which forms
the basis for all obviousness rejections set forth in this Office
action:

> *(a) A patent may not be obtained though the invention is not
> identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that
> the subject matter as a whole would have been obvious at the
> time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which
> the invention was made.*

Claims 1-5, 10-14 and 44-48 are rejected under 35

U.S.C. 103(a) as being unpatentable over HyperNet as disclosed by

Wynne et al. in "Lean Management, Group Support Systems, and

Hypermedia: A combination whose time has come" and further in

view of Hansen "Andrew as a Multiparadigm Environment for Visual

Languages".

As per claim 1, Wynne disclosed a method for running an

application program in a computer network environment essentially

as claimed, comprising:

providing at least one client workstation and one network

server coupled to said network environment, wherein said network

environment is a distributed hypermedia environment [

Abstract "world-wide over INTERNET"];

executing, at said client workstation, a browser application

[p.113 col.1 2nd paragraph "browser"], that parses a distributed

hypermedia document and initiates processes specified in the

document [p.113 "Active link"];

Wynne did not specifically disclose the document having text

formats. It is not clear whether the HyperNet's hypermedia

documents disclosed by Wynne uses text formats. However it is

well known in the art at the time of the invention to form

hypermedia documents using text formats (e.g. SGML, HTML, etc.).

Hansen teaches to use text because it is machine independent so

the result is more portable [p.257 4th paragraph]. Hence, one of

ordinary skill in the art would have been motivated to use text

formats to form hypermedia document.

Wynne teaches utilizing browser to display, on said client

workstation, a hypermedia document received over said network

from said server, wherein said first hypermedia document is

displayed within a first browser-controlled window [inherent] on

said client workstation and wherein said first distributed

hypermedia document includes an embed text format [inherent in

the system as modified] that specifies the location of an object

external to the first distributed hypermedia document and that

specifies type information utilized by said browser to identify

and locate an executable application [p.113 col.1 4th paragraph -

"Active links"] external to the first distributed hypermedia

document;

invoking, with said browser application, said executable

application [p.113 col.1 1st paragraph] to display and process

said object.

Wynne does not disclose displaying and process said object

within the first browser-controlled window while a portion of

said first distributed hypermedia document continues to be

displayed within said browser-controlled window. The external

application is launched into a separate window to process the

object [p. 113 col.1 lines 5-10].

Hansen teaches "it may be adequate to display each

sublanguage element in a separate window, but this runs the risk

of chaotic imagery among which it is difficult to discern the

relationships among program segments. Instead, the author should

have the power to organize the program fragments for perusal by

the reader. The organization itself, together with commentary,

aids the reader in comprehending the program." [p.256 col.2].

Hence, it would have been obvious for one of ordinary skill in

the art to provide external application to display and process

the object within the browser-controlled window because it would

have improved the system by reducing clustering of the display

and aiding the reader comprehension of the hypermedia document.

As per claim 2, Wynne disclose interactively controlling the executable application via communication over the network [p.113 col.2 "UPLINK", "DNLINK", "BILINK"].

As per claim 3, it is apparent that the network server [source] execute one or more instructions in response to commands from a client [DNLINK] and sending information from said network server to the client workstation in response to said executed instructions.

As per claim 4, it is inherent that the instruction for controlling the object reside on the client workstation [Wynne's p.113 col.1 lines 5-12"].

As per claim 5, it is apparent in the system as modified that communication would continue to be exchange between the controllable application and the browser in order for the controllable application to control the object within the browser's window.

As per claims 10-14, Wynne discloses that HyperNet communicates over the Internet. Hence, it is apparent that the HyperNet would use ISO TCP/IP standard and Hypertext Transfer Protocol. It would have been obvious for one of ordinary skill in the art at the time of the invention to use ISO TCP/IP standard and Hypertext Transfer Protocol because these are well

defined standard for communicating hypermedia documents over the
Internet.

As per claim 44, it is rejected under similar rationale as
for claim 1 above.

As per claims 45-48, they are rejected under similar
rationale as for claims 2-5 above.

**Claims 6-9, and 49-53 are rejected under 35 U.S.C. 103(a) as
being unpatentable over Wynne et al. in "Lean Management, Group
Support Systems, and Hypermedia: A combination whose time has
come", Hansen "Andrew as a Multiparadigm Environment for Visual
Languages", and further in view of Rizzo "What's OpenDoc?"** (prior
art submitted by applicant).

As per claims 6-9 and 49-52, The applied references do not
specifically disclose application being a multi-dimension viewer,
a spreadsheet, a database, or word processor program. Rizzo
discloses a systems that allows for embedding object of different
applications (word processing, spreadsheet, database, movie) in
one document and manipulation of the object within the document
using functions of the corresponding application. Hence, it was
well within the skill on one of ordinary skill in the art to
provide controllable application for database, spreadsheet, word
processing, etc. functions. The type of program provided would
have been a matter of design choice.

As per claim 53, It would have been obvious for one of ordinary skill in the art at the time of the invention to use Hypertext Markup Language because it is a well defined standard for forming hypermedia documents.

Claims 15, 17-23, 24-33, 34-43, 54, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wynne et al. in "Lean Management, Group Support Systems, and Hypermedia: A combination whose time has come", Hansen "Andrew as a Multi-paradigm Environment for Visual Languages", and further in view of Moran "Tele-Nice-Slicer: A New Tool for the Visualization of Large Volumetric Data".

As per claim 15, it is rejected under similar rationale as for claim 1 above. Wynne and Hansen do not specifically teach a multidimensional data visualization application.

Moran discloses a distributed system for interactive control and visualization of graphical object through communication over network. Moran teaches determining orientation and rendering of images by sending command comprising of text fields [p.3 col.1] over communication network.

It would have been obvious for one of ordinary skill in the art to combine Moran teaching with Wynne because it would have improved the system to provide powerful image visualization, presentation and control to scientists world wide.

As per claims 17-22, the recited limitations - volume
visualization, 2d image, image analysis, animated sequences,
geometric viewer, and molecular modeling - would have been a
matter of design choice because they are merely well known
visualization methods.

As per claim 23, it is apparent in the system as modified
that communication continue to be exchange between the
multidimensional data visualization application and the browser
in order for the visualization application to control the object
within the browser's window.

As per claim 24, it is rejected under similar rationale as
for claim 15 above. The references do not specifically disclose
the step of transferring ..., accepting ..., executing ...,
communicating ..., using ... The steps recited is inherent in the
prior art as modified because:

It is well known in the art, at the time of the
invention, that HTML documents contains links specified by
URL's. It is known that HTML documents transfers involves
HTTP protocol messages. The process involves:

transferring, over the network, a hypermedia document
[the HTML document] with embedded objects [URL links, mapped
images, fill-in forms, etc.] from a server computer to the
client computer;

parsing the document by the browser to locate reference

to external objects [URL's, images, etc.];

accepting first signals from the user input device

[clicking on an URL link, or a mapped image, or a form's

'submit' button]

issuing commands [HTTP message with the linked URL, or

coordinates where the mapped image was clicked, or the

form's content] from the client computer to a first computer

in response to the signal [it is known that an HTTP message

in an HTML document can direct to any computer connected to

the Internet that accept HTTP protocol];

Moran teaches executing instructions by a first

additional computer and generate information about

manipulating the embedded object; communicating the

information to the client; and using the client to

manipulate the object according to the communicated

information [Apparent from p.3 "TNSD client functionality"

and "TNSD Server Functionality"].

As per claims 25, 27, the document is a hypermedia document

[Wynne p.112 col.2 3rd paragraph].

As per claim 26, It would have been obvious for one of

ordinary skill in the art to have multiple computers to response

to issued commands because it would have distributed the
processing load.

As per claims 28, 30, and 32 the references do not
specifically disclose multi-dimensional image displayable in
plurality of orientations, and function to determine the new
orientation and rendering of image. The type of objects and
functions provided would have been a matter of design choice.

Moran discloses a distributed system for interactive control
and visualization of graphical object through communication over
network. Moran teaches determining orientation and rendering of
images by sending command comprising of text fields [p.3 col.1]
over communication network.

It would have been obvious for one of ordinary skill in the
art to combine Moran teaching with Wynne because it would have
improved the system to provide powerful image visualization,
presentation and control to scientists world wide.

As per claims 29, 31, 33, Wynne teaches the document is a
hypermedia document [Wynne p.112 col.2 3rd paragraph].

As per claims 34, it is rejected under similar rationale as
for claim 24 above.

Moran does not specifically disclose a second server. However, it would have been obvious for one of ordinary skill in the art to provide plurality of servers to speed up processing.

As per claims 35, 37, 39, 41, and 43, Wynne teaches the system is a distributed hypermedia environment [Wynne p.112 col.2 3rd paragraph].

As per claim 36, Moran teaches distributing the processing on various computers [client - server]. It would have been obvious for one of ordinary skill in the art to distribute the processing to the machine such that the instructions is executed faster.

As per claims 38 and 40, Moran teaches determining orientation and rendering of images [p.2 - p.3].

As per claim 42, Moran teaches dynamically manipulate the object [p.2 - zoom]. It is apparent that the system as modified would accept signal from user input to indicate a second orientation of an object.

As per claim 54, it is rejected under similar rationale as for claim 15 above.

As per claim 55, it is rejected under similar rationale as for claim 24 above.

As per claim 56, it is rejected under similar rationale as

for claim 34 above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the
extension of time policy as set forth in 37 CFR 1.136(a).
A shortened statutory period for response to this final
action is set to expire THREE MONTHS from the date of this
action. In the event a first response is filed within TWO MONTHS
of the mailing date of this final action and the advisory action
is not mailed until after the end of the THREE-MONTH shortened
statutory period, then the shortened statutory period will expire
on the date the advisory action is mailed, and any extension fee
pursuant to 37 CFR 1.136(a) will be calculated from the mailing
date of the advisory action. In no event will the statutory
period for response expire later than SIX MONTHS from the date of
this final action.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Dung Dinh
whose telephone number is (703) 305-9655. The examiner can
normally be reached on Monday-Thursday from 7:00 AM - 4:30 PM.
The examiner can also be reached on alternate Friday.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Thomas Lee can be reached
at (703) 305-9717. The fax phone number for this group is (703)
308-5359.

Any inquiry of a general nature or relating to the status of
this application should be directed to the Group receptionist
whose telephone number is (703) 305-9600.

Dung Dinh
Jan. 23, 1997

THOMAS C. LEE
JPERVISORY PATENT EXAMINER
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